UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,144	08/08/2003	Donald B. Gage	DC-05201	3411

33438 7590 09/07/2006

HAMILTON & TERRILE, LLP
P.O. BOX 203518
AUSTIN, TX 78720

EXAMINER	
GIESY, ADAM	

ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/637,144	GAGE ET AL.	
	Examiner	Art Unit	
	Adam R. Giesy	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1 and 18 are objected to because of the following informalities:

The first instance of the term "OPC" should be clarified in all claim sets to read "OPC (Optimum Power Calibration)".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14, 15, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14, the term "unknown medium" is vague and indefinite since the term fails to adequately describe types of media that the optical medium write power calibration method can be performed on.

Regarding claims 14 and 15, the term "generic write strategy" is vague and indefinite since the term fails to adequately describe a type of write strategy that the optical medium write power calibration method can be performed on.

Regarding claim 19, the term "generic write strategy" is vague and indefinite since the term fails to adequately describe a type of write strategy that the optical medium write power calibration system can identify.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Kurobe et al. (hereinafter Kurobe – US Doc. No. 2006/0067190 A1).

Regarding claim 1, Kurobe discloses an information handling system comprising: processing components operable to generate information for storage on an optical medium (see Figure 1, elements 9, 11, and 13-16); an optical disk drive interfaced with the processing components and operable to process the information for writing to the optical medium (see Figure 1); a write strategy table having plural write strategies, each write strategy associated with one or more optical medium types (Figure 6); a laser associated with the optical disk drive and operable to illuminate the optical medium to burn information onto the optical medium with a write strategy associated with the optical medium or to read information from the optical medium (Figure 1, element 5); and an OPC engine interfaced with the write strategy table and the laser, the OPC engine operable to perform test writes and reads at plural distributed locations of the optical medium, the test writes having predetermined variations of the write strategy associated with the optical medium, the OPC engine adjusting the write strategy to write

the generated information to the optical medium based on the quality of modulated signals read from the test writes at the distributed locations (see page 11, paragraph 0141).

Regarding claim 7, Kurobe discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the system further comprises volatile memory interfaced with the optical disc drive and operable to store the adjusted write strategy for use on a subsequent write to an optical medium of the same type (see Figure 1, element 17b).

Regarding claim 8, Kurobe discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above and further that the system further comprises non-volatile memory interfaced with the optical disc drive and operable to store the adjusted write strategy for use on a subsequent write to an optical medium of the same type (see Figure 1, element 17a).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2, 3, 6, 10, 13, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurobe et al. (hereinafter Kurobe – US Doc. No. 2006/0067190 A1) in view of Kubota et al. (hereinafter Kubota – JP Doc. No. 09-282696).

Regarding claim 2, Kurobe discloses all of the limitations of claim 1 as discussed in the claim 1 rejection above. Kurobe fails to disclose test writing to the inner, middle, and outer circumferences of the disc.

Kubota discloses an optical recording device in which the OPC engine test writes are to an inner diameter track, middle diameter track and outer diameter track of the optical medium (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording device as disclosed by Kurobe with the optical recording device that test writes to multiple designated disc circumferences as disclosed by Kubota, the motivation being to better configure the power settings of the optical recording laser to write on the various surfaces of the optical disc.

Regarding claim 3, Kurobe and Kubota disclose all of the limitations of claim 2 as discussed in the claim 2 rejection above. Kubota further discloses that variations of the write strategy comprise write power variations and wherein the OPC adjusts the write strategy to write the generated information to an average of the write power at each of the inner, middle and outer diameter tracks that provided a modulated signal having the least amplitude and jitter variations (see abstract – note the passage in the abstract regarding the interpolation circuit).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording device as disclosed by Kurobe with the write strategy that uses an average of the test write power variations as

disclosed by Kubota, the motivation being to better configure the power settings of the optical recording laser to write on the entire surface of the optical disc.

Regarding claim 6, Kurobe and Kubota disclose all of the limitations of claim 2 as discussed in the claim 2 rejection above. Kurobe further discloses that the optical medium comprises a CD-RW disc (see page 1, paragraph 0006).

Regarding claim 10, Kurobe discloses a method for re-writable optical medium write power calibration, the method comprising: determining a write strategy from an identification code of an optical medium (see Figure 27, elements 51-53). Kurobe does not disclose test writing and plural locations, or averaging the test writing results to modify the write strategy.

Kubota discloses an optical device that performs test writes and reads at plural locations distributed across the optical medium, the test writes having predetermined variations from the power setting of the write strategy (see abstract); analyzing the modulated signal read from each test read to determine the power setting variation at each location having the least amplitude and jitter variations (see abstract); averaging the determined power setting variations for the locations to determine an adjusted write strategy (see abstract); and writing information to the re-writable optical medium with the adjusted write strategy (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording method as disclosed by Kurobe with the plural test writing and averaging as disclosed by Kubota, the motivation being

to better configure the power settings of the optical recording laser to write on the various surfaces of the optical disc.

Regarding claim 13, Kurobe and Kubota disclose all of the limitations of claim 10 as discussed in the claim 10 rejection above. Kurobe further discloses that the optical medium comprises a CD-RW disc (see page 1, paragraph 0006).

Regarding claim 16, Kurobe and Kubota disclose all of the limitations of claim 10 as discussed in the claim 10 rejection above. Kurobe further discloses storing the adjusted write strategy in volatile memory; and writing information to another re-writable optical medium having the identification code by using the adjusted write strategy (see page 21, paragraph 0241 – note that the document refers to the ROM, Figure 1, element 17b, when the RAM is clearly marked as element 17b in Figure 1 – the Examiner will interpret this to mean RAM as depicted in Figure 1).

Regarding claim 17, Kurobe and Kubota disclose all of the limitations of claim 10 as discussed in the claim 10 rejection above. Kubota further discloses that performing test writes further comprises performing test writes at an inner diameter, middle diameter and outer diameter location of the optical medium (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording method as disclosed by Kurobe with the optical recording method that test writes to multiple designated disc circumferences as disclosed by Kubota, the motivation being to better configure the power settings of the optical recording laser to write on the various surfaces of the optical disc.

Regarding claim 18, Kurobe discloses a system for re-writable optical medium write power calibration, the system comprising: a write strategy table associating re-writable optical medium identification codes and write strategies, each write strategy having a write power setting (see Figure 6); and an OPC engine interfaced with the write strategy table, the OPC engine operable to determine a write strategy for an optical medium from the write strategy table (see Figure 27). Kurobe does not disclose plural test writings or averaging of the test writings to modify the original laser power.

Kubota discloses an optical device in which OPC is performed and used to adjust the determined write strategy's write power setting by performing test writes and reads at plural distributed locations of the optical medium, determining the power setting at each location that had the lowest read amplitude and jitter variations, and averaging the determined power settings to determine the adjusted write power setting (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording device as disclosed by Kurobe with the plural test writing and averaging as disclosed by Kubota, the motivation being to better configure the power settings of the optical recording laser to write on the various surfaces of the optical disc.

Regarding claim 19, Kurobe and Kubota disclose all of the limitations of claim 18 as discussed in the claim 18 rejection above. Kurobe further discloses that the determined write strategy for the optical medium comprises a generic write strategy (see generic write strategies in Figure 6).

Regarding claim 20, Kurobe and Kubota disclose all of the limitations of claim 18 as discussed in the claim 18 rejection above. Kurobe further discloses memory interfaced with the OPC engine and operable to store the adjusted write power setting for use with a write to a subsequent optical medium having the same identification code (see page 21, paragraph 0241 – note that the document refers to the ROM, Figure 1, element 17b, when the RAM is clearly marked as element 17b in Figure 1 – the Examiner will interpret this to mean RAM as depicted in Figure 1).

8. Claims 4, 5, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurobe et al. (hereinafter Kurobe – US Doc. No. 2006/0067190 A1) in view of Kubota et al. (hereinafter Kubota – JP Doc. No. 09-282696) and further in view of Nadershahi (US Doc. No. 2004/0130993 A1).

Regarding claim 4, Kurobe and Kubota disclose all of the limitations of claim 2 as discussed in the claim 2 rejection above. Both Kurobe and Kubota fail to disclose DVD-RW and DVD+RW optical disc formats.

Nadershahi discloses an optical device that performs OPC for many formats including DVD-RW (page 1, paragraph 0018).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording device as disclosed by the combination of Kurobe and Kubota (discussed above) with the OPC on several formats as disclosed by Nadershahi, the motivation being to allow for compatibility with many types of optical media.

Regarding claim 5, Kurobe and Kubota disclose all of the limitations of claim 2 as discussed in the claim 2 rejection above. Both Kurobe and Kubota fail to disclose DVD-RW and DVD+RW optical disc formats.

Nadershahi discloses an optical device that performs OPC for many formats including DVD+RW (page 1, paragraph 0018).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording device as disclosed by the combination of Kurobe and Kubota (discussed above) with the OPC on several formats as disclosed by Nadershahi, the motivation being to allow for compatibility with many types of optical media.

Regarding claim 11, Kurobe and Kubota disclose all of the limitations of claim 10 as discussed in the claim 10 rejection above. Both Kurobe and Kubota fail to disclose DVD-RW and DVD+RW optical disc formats.

Nadershahi discloses an optical device that performs OPC for many formats including DVD-RW (page 1, paragraph 0018).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording method as disclosed by the combination of Kurobe and Kubota (discussed above) with the OPC on several formats as disclosed by Nadershahi, the motivation being to allow for compatibility with many types of optical media.

Regarding claim 12, Kurobe and Kubota disclose all of the limitations of claim 10 as discussed in the claim 10 rejection above. Both Kurobe and Kubota fail to disclose DVD-RW and DVD+RW optical disc formats.

Nadershahi discloses an optical device that performs OPC for many formats including DVD+RW (page 1, paragraph 0018).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording method as disclosed by the combination of Kurobe and Kubota (discussed above) with the OPC on several formats as disclosed by Nadershahi, the motivation being to allow for compatibility with many types of optical media.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurobe et al. (hereinafter Kurobe – US Doc. No. 2006/0067190 A1).

Regarding claim 9, Kurobe discloses all of the limitations of claim 8 as discussed in the claim 8 rejection above and further that the system stores information on a non-volatile memory (see Figure 1, element 17a). Kurobe does not distinctly claim a

Kurobe discloses the claimed invention except for the non-volatile memory being a hard drive. It would have been an obvious matter of design choice to replace the ROM with a hard drive (as both are forms of non-volatile memory) since the applicant has not disclosed that using only a hard drive solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the use of a ROM as non-volatile memory storage.

10. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurobe et al. (hereinafter Kurobe – US Doc. No. 2006/0067190 A1) in view of Kubota et al. (hereinafter Kubota – JP Doc. No. 09-282696) and further in view of Stan (WO 2003/091935 A3).

Regarding claim 21, Kurobe and Kubota disclose all of the limitations of claim 18 as discussed in the claim 18 rejection above. Both Kurobe and Kubota fail to disclose a blue laser re-writable disc.

Stan discloses power calibration on a Blu-ray disc (see abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the optical recording device as disclosed by Kurobe with the plural test writing and averaging as disclosed by Kubota and the power calibration of a blue laser re-writable disc as disclosed by Stan, the motivation being to allow for a wider range of compatibility for the media used in the optical system.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Schreurs et al. (US Pat. No. 7,038,982 B2) discloses a recording method involving OPC settings on various types of optical media.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 8/22/2006

WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600